

ABSTRACT

An integrated circuit system having a plurality of macros is provided. The integrated circuit system includes an external voltage supply input configured for supplying an external voltage to the integrated circuit; and a plurality of internal voltage supply generators, each of the plurality of internal voltage supply generators being connected to a respective macro of the plurality of macros and configured for receiving the external voltage via the external voltage supply input for generating an internal voltage supply for operating its respective macro. Each of the plurality of internal voltage supply generators includes circuitry for generating the internal voltage supply and circuitry for disconnecting at least a portion of its respective macro. The integrated circuit system can be applied to a semiconductor chip to save active or stand-by power. It can also be used to disconnect a defective portion of the chip and optionally replace it with a non-defective portion of the chip.